

13261
OBSERVATIONS

ON 8561aaa

TIME,

Sacred and Profane:

BEING

Chronographical Disquisitions

ON THE

Julian and Gregorian

STYLES;

Etymological Notes on the Names of
Years, Months, and Days.

ALSO

Historical Remarks on the various Holy-
Days, either Fasts, or Festivals in Use
in *England*; their Original, Names,
End, and Use, fitted to this present
Year 1709. K

By N. N. Philomath.

LONDON, Printed for the Author, and
Sold by J. Morphew, near Stationer's
Hall. 1709.

ORSERVATIONS

TIME

Second and Third

Edinburgh

Geographical

ON THE

Unions and Counties



Historical Remains of the various

Days, either before or after the

in various parts of the country

End, and the state of the

Year 1753

By J. Johnson

London, Printed by J. Johnson

Sold by J. Johnson

Half price

T H E

INTRODUCTION.

ETERNITY invirons *all*, Time comprehends *human* Actions, and differs from it chiefly by its Deflux into *past*, *present*, and *to come*. Whereas *Eternity* is permanent, and immoveable, suffering no Deflux nor Variation, has but one Denomination, is incapable of *Past*, *Present*, and *Future*, knows no bounds, Stations or Periods; Time is constituted by the Motion of the Luminaries, it measures the Quantity or Duration, fixes the Beginning, Intervals, and Periods of Actions, is distinguished into several Denominations; as *Centuries*, *Years*, *Months*, *Days*, *Hours*, &c.

Time is either *ordinary*, or *extraordinary*; the latter is made so either by God's Command, or Man's Appointment, being constituted, either as *Commemorative* of great Actions done, or great Calamities suffer'd, or, as *Memorials* of Gratitude, and Opportunities of Humiliation, which are either *Fasts* or *Festivals*; either *Civil* or *Ecclesiastical*, the Import of some of which, being much effaced by the Injury
of

of Time, I design to freshen by the following Explanation, which for Method's sake, I shall follow in the Order they annually return in.

Of *Aera's* and *Epocha's*.

AR *A* is derived either of the *Arabick* *Tarich*; *Supputatio*, *Aera*, as some suppose, or of *As*, signifying Tribute-Money, and had its Original from *Augustus Caesar*, when he caused the whole World to be taxed, or to pay *As*; but others account it an Abbreviation of the Words *Annus erat*, *Augusti*, it was the Year, of *Augustus*, thus; *A.* for *Annus*, *er*, for *erat*, *A.* for *Augusti*: It is the *terminus a quo*, of Computations, or the Beginning of some notable Account of Years, which is diversly fixed by different Nations. The *Jews* beginning their grand *Aera* at the Creation of the World; the ancient *Romans* at the Building of the City of *Rome*; the *Christians* at the Birth of our Saviour; tho' the Computation took not Place 'till begun by *Dionysius Exiguus*, in the Time of the Emperor *Justinian*, about *Ann. Christi*, 527. Nor did generally obtain for many Ages after, as *Scaliger* testifies; not in the Kingdom of *Arragon* till 1358. of *Castile* till 1388. of *Portugal* till 1415. The *Turks* begin their *Aera* from *Hegirah*, i. e. The Flight of their Prophet

phet *Mahomet*, who being persecuted by the Magistrates of *Mecha*, for broaching his Opinions, and affecting the Kingdom, fled thence to the City *Jedrib*, to which he return'd, having gotten an Army, besieged, took, and slew the greatest Part of the Citizens, and set up a Kingdom, *Anno Christi*, 622. July 16. on Friday, honour'd by him with a Sabbatical Sanction.

An *Epocha* differs not much, if at all, from *Ara*, and is derived from the Greek *Επὶχρησις*, a *sistendo*, whence *Ἐποχή*, it being, as it were a Boundary, that marks out the *Intervals* of History, by taking Notice of some notable Events, as *Noah's Flood*, the Destruction of *Troy*; the Building of *Solomon's Temple*: Or the Beginning of the Reign of some illustrious King, as *Nabonassar*, *Dioclesian*; the Institution of some Religion, as the *Olympick Games*, &c.

Of the Year.

THE Year is supposed, to have taken its Name, from it's Mutability, as in the *Hebrew*, *Shanah*, a Year, from *Shanah*, he was changed, or reiterated; so in *Greek* 'tis called *Ἐνιαυτός*, as though ἐν αὐτῷ εἶναι, as being involved into it self. And thence the Ancient *Egyptians* in their *Hieroglyphical* way of Writing, used to express the

6 *Observations on Time,*

the Year, by a Serpent, with the Tail in its Mouth, to which *Virgil* seems to allude in this Verse,

[*Atq; in se sua per Vestigia volvitur Annus.*

The *Latins* call it *Annus*, as though from *Annulus* a Ring, by Reason of its constant circular Motion. For so the Sun, the true Effector of the Year, winds round the Earth in its own Orb from *West* to *East*, and at the same Time by Reason of the Obliquity of the Ecliptick (or Line of the Sun's Motion) with the Equator, continually approaches *North* or *South*, till he reach the *Tropicks* of *Cancer* or *Capricorn*; his utmost *Northern* and *Southern* Bounds, by this Motion making the various Seasons of the Year; *Spring*, *Summer*, *Autumn*, *Winter*, moving constantly in an Elipsis, through the Middle of the *Zodiack*.

Of the Kinds of Years.

THE Year is of two Kinds, *Solar* and *Lunar*. The *Solar* Year is made by the Motion of the Sun, and is either *Siderial*, or *Tropical*. The *Siderial* Year is so called of *Sidus*, a *Star*, or *Constellation*, and contains that Space of Time, in which, the Sun departing from any fixed Star, returns to it again, and is greater

greater than the Tropical Year; it containing 365 Days, 6 Hours, 9 Minutes, 14 Seconds; and the *Tropical*, but 365 Days, 5 Hours, 48 Minutes, 57 Seconds; according to Mr. Newton's *New Theory*. The *Tropical Solar Year*, is so called, from the *Latin*, *Tropicalis*, from the *Greek*, *Tropichos*, *vertens*, because that when the Sun approaches to these two imaginary Circles, *North* or *South*, he turns back again: It contains that Space of Time, that the Sun is going from some determinate Point in the *Zodiac*, to his Return to the same Point again, which is as above. This *Tropical Year* is that, which We in *England*, and the rest of *Europe*, generally account by.

2. The *Lunar Year* is of two Sorts, *Common* or *Embolismical*. The *Common* contains 12 *Synodical* Lunations, or 354 Days: Eleven Days, 5 Hours, 48 Minutes, 57 Seconds, *plus minus*, less than the *Solar* or *Tropical Year*, and therefore the Beginning of the Year, and all the Feasts and Fasts fall out, sometimes in Spring, sometimes in Summer, sometimes at Autumn, and sometimes in Winter, wandering quite through the Year in about 33 Years. This Year is used among the *Turks*, *Arabians*, and *Indians*, generally in warm Climates, where there is not so sensible a Difference between *Summer*, and *Winter*, as in these *Northern Climates*.

The

The *Lunar Embolismical Year* may be called the *Solo-Lunar Year*, because that tho' it is accounted by the Moon, yet there is also Regard had to the Sun's Course, to keep it from varying too far in it's Beginning, and Seasons, from the *Tropical*, or *Solar Year*. This sort of Year was in Use by the *Atticks*, *Greeks*, and *Jews*; the first of which constituted their Year, of 12 Synodical Lunations, or Moons, and because this was too short for the Sun's Year, they, once in 2 or 3 Years, used to intercalate a whole Month, according to the Callippick Period. The *Jews*, in like Manner, made their Year consist of 12 Lunations, or *Moons*, which contains according to the *Hebrews*, 29 Days, 12 Hours $\frac{793}{1080}$, and therefore every other Month contains 30 Days, except *Marcheshvan* and *Cisleu*, and the *Common Lunar Year* contains 354 Days, 8 Hours $\frac{876}{1080}$, which is 10 Days, 21 Hours, and $\frac{294}{1080}$, less than the *Solar Year*, which once in 3 Years, amounts to 32 Days, 15 Hours, and $\frac{613}{1080}$, and the Remainder of Days, and Hours, and Minutes, are reserved as an *Epact*, for the following Year. So that the difference of the Year, is in the Months *Marcheshvan* and *Cisleu*, which sometimes contain both 29, and so the Year but 353 Days, and is called the *Common Deficient Year*, sometimes 354. one 29, and the other 30, and is called the *Medial Common Year*, and sometimes

times both 30, 355, and is called the *Common Full Year*. But the Year, being as is said, 10 Days, 21 Hours, and $\frac{204}{1087}$, less than the *Solar Year*, therefore the Year is once in 3 Years embolifated, or a whole Month is put in between *Adar* and *Nisan*, and called *Veadar*; and consists of 385 Days both *Marcheshvan* and *Cisleu* containing 30 Days, and is called the *Embolismical Full Year*; and sometimes 384 Days, and is called the *Middle Embolismical Year*; and sometimes 383, and is call'd the *Deficient Embolismical Year*. Which Variety, is according to the Distance of the Moons of the preceeding, and succeeding Years.

For the *Jews* have a double Beginning of their Year, the one *Ecclesiastical*, beginning at *Nisan*, answering commonly to Part of *March*, according to *Exod. 12. 2.* *This Month shall be unto you the Beginning of Months: It shall be the first Month of the Year.* And from hence they reckon their *Passover*, and other Festivals; And the other a Civil Beginning of the Year at *Tisri*, on the Account of the Creation of the World (which they suppose) was created about *Autumn*, when the Virgin Earth had Fruits ripe, and eatable, for the new formed Inhabitants, since which Time they reckon to *September, 1708.* 5470 Years to have elapsed.

Of the Beginning of the Year.

AS the Quantity of Time the Year contains, and Method of forming it are various, so is the Beginning of it also.

1. The *Atticks* begin their Year at the Summer Solstice, or the New Moon next to it.

2. The *Copti*, *Ethiopians*, and *Alexandrians*, begin theirs before the Autumnal Equinox on the 29th. of *August*, according to the old unreformed Calendar.

3. The *Jews* begin their Civil Year, on the Account of the Creation of the World at the Month *Tizri*, at the New Moon next to the Autumnal Equinox; most commonly about our *September*, or *October*, but sometimes at the latter end of *August*: But they begin their Ecclesiastical Year at the Month *Nisan*, most frequently answering to *March*, or *April*. From this they account all their Feasts and Fasts.

4. The *Syrians*, and *Syrogreicians*, begin their Year from the first Day of *October*, Julian Stile.

5. The *Muscovites* begin their Year at the Beginning of *September*.

6. The *Venetians* begin their Year, some at the first of *March*; others from the 25th of *December*.

7. The ancient Romans, by the Appointment of *Romulus*, began their Year with the *Vernal Equinox*; but afterwards by the Appointment of *Numa*, with the Month of *January* about the *Hybernal Solstice*, i. e. the 11th of *December*, or shortest Day, when the Sun enters *Capricorn*: But the Beginning of the Year is varied now 9 Days, according to the *Gregorian Account* from the *Winter Solstice*, and 10 according to the *Julian*, and so the Beginning of the Year is not agreeable to what it was at its first Ordination. This being premised of the Beginning of the Year, we use in *England*, I shall next treat of the Year it self more particularly.

Of the Julian Account, or Stile:

HAVING already given some Account, of the various Sorts of Years in Use among diverse Nations, and of the Difference between the *Solar* and *Lunar* Years, I come now to treat more particularly upon the *Tropical* or *Solar* Year, That Year which is now generally used in *Europe*. And for as much as there is a Difference, of Eleven Days exclusively, between the Account or Stile of *England*, and that of the Generality of the rest of *Europe*, viz. *Holland*, *Germany*, *France*, *Spain*, *Italy*, &c. who nce the Year 1700, reckon their Time eleven Days before us, so

that the First of *January* with us, is the Twelfth of *January* with them; I shall endeavour briefly, and plainly to account for the Diversity.

It has been said before, that the Sun being the Constitutor of the Natural Year, and the Seasons thereof, making his Annual Revolution in no even Number of Days or Months, but in 365 Days, 5 Hours, 49 Minutes, 4 Seconds, 21 Thirds (according to *Bullialdus*) and so not exactly answering to any even Number of Days (as the *Egyptians*, &c. computed their Years) nor Months, (as the *Ancient Romans*, &c. reckon'd theirs) has made this Variation. For the Ancients (rarely so well versed in Astronomy, nor so familiarly acquainted with the remoter Planet the Sun, and his longer Course, as with their nearer Neighbour the Moon, and her oftner repeated Traverse,) framed their Year mostly by her Motion, as the *Ancient Grecians* and *Romans*, who in the Time of their Superintendancy here in *England*, are supposed to have sent us over the Form of their Year, which for the fuller Understanding I shall trace from its Infancy.

When *Remulus*, the Original of the *Roman* Name, and Founder of *Rome's* famous City, first undertook to reduce the Rustic *Latines* to the Civil Polity, he, among other Institutions, appointed the Limits
of

of the Year, which he made to consist of Ten Months, as *Ovid* sings,

*Tempora digereret cum conditor urbis in Anno
Constituit menses quinque bis esse suo.*

Which also appears by the Latin Names of the Months *July*, *August*, *September*, *October*, *November*, *December*, which were *Quintilis* *June*, from *Quintus* the Fifth, *Sex-tilis* *August*, from *Sextus* the Sixth, *September* from *Septem* Seven, *October* from *Octo* Eight, *November* from *Novem* Nine, *December* from *Decem* Ten, reckoning from *March* the First Month. But *Numa Pompilius* his Successor perceiving his Predecessor's Years too short, added Two Months (each consisting of Twenty Five Days) to it, which he called *January* and *February*, putting them in before *March*, the Beginning of the Year. Of these *Ovid. Metamorphosis*, lib. 1.

*At Numa nec Janum, nec avitas praterit umbras
Mensibus antiquis addidit ille duos.*

So by this Addition of Fifty Days, *Numa's* Year consisted of 354 Days, which he afterwards, out of a superstitious Conceit of an odd Number, augmented by one Day more, and so made it to contain 355 Days. Thus it remained a long Time. But was too short for the Sun's Year by 10 Days,
6 Hours

6 Hours *fere*, which caused a great Disorder in the Seasons of the Year. Which the *Roman Pontiff* or *Flamen Dialis* used to regulate by intercalating sometimes a Month every Second or Third Year, and sometimes three Months once in Eight Years, which Secret conceal'd from the Vulgar, and lock'd up in his Breast, procur'd him Reverence from the Commonalty, and often Bribes from them, that were desirous of continuing longer in their Offices, or the Customs that they had farmed for that Year.

Thus the Year stood 'till the Emperor *Julius Caesar* (about 38 Years before Christ) being *Flamen Dialis*, or High Priest, and instructed by expert Mathematicians, from *Alexandria* found, that the Year wanted 10 Days, 6 Hours *fere* of the true Solar or Tropical Year, and by the Assistance of *Sosigenes*, an able Astronomer, he, after the Conquest of *Pompey*, regulated the Year before consisting of 355 adding the Ten Days wanting to it, and made it consist of 365 Days, which were divided into 12 Months, consisting either of Thirty One, and Thirty Days each, except *February*, according to these Verses,

April ter denos, June, September, November,
 Uno plus reliqui, viginti Februus octo,
 At si Bissextus fuerit, superadditur unus.

In English thus,
 Thirty Days hath September,
 April, June, and November,
 February hath Twenty Eight alone,
 And all the rest have Thirty One,
 But when of Leap-Year comes the Time
 Then February hath Twenty Nine

And as for the odd 6 Hours, lest they should create a Disorder in the Year afterwards, he ordered that every fourth Year, one Day should be intercalated or put into the Month February, between the Twenty fourth and Twenty fifth Days of that Month, which according to the old Latin Calendar was called *Sext. Calend. Martii*, or the 6th. of the Calends of March; and by the Interposition or Intercalation of this Day, there was two *Sext. Calend. Martii*, and the Word *bis* Latin for two, being added to *Sext. Sextilis*, it signified Twice the *Sextile*, and made *Bissextilis*, or *Bissextile*, which is the Meaning, and Formation of the Name *Bissextile*. Hence every Fourth Year, in which, there is this intercalated Day, or in which, February hath Twenty Nine Days is called *Bissextile* its Latin Name: But we call it in English *Leap Year*, probably from the Dutch, *Loep-jaar*, because it leaps beyond, or exceeds the Bounds of other Years by a Day. The Names of the Months, were *March*, *April*, *May*, *June*, *Quintilis*, and *Sextilis* which

(which in *Augustus Caesar's* Time in Honour to *Julius Caesar* and *Augustus Caesar*, were called *Julius* or *July*, *Augustus* or *August*) *September*, *October*, *November*, *December*, but after the Addition of *Numa Pompilius*, began *January*, *February*, *March*, *April*, *May*, *June*, *July*, *August*, *September*, *October*, *November*, *December*, which is the exact State and Condition of the *Julian Year*, or the Year we use in *England*, which is called *Old Stile* or *Julian Stile*, and has remained in Use ever since before the Birth of our Saviour.

Of the Gregorian Stile or Year

HAVING given you to understand the State of the old *Julian Year*, I now come to give some Account of the *New Stile*, or *Gregorian Year*, which is that our Neighbours in most Parts of *Europe* reckon by. This *Julian Year*, as has been said before, being made of 365 Days, 6 Hours, is greater than the true *Solar Year* (according to *Bullialdus*) by 10 Minutes, 55 Seconds, 39 Thirds, which although it is but a little Time, yet in many Years makes a great Variation, coming to a whole Day in 132 Years *plus minus*: So that in the Year 1668 the Sun had gained 12 Days of the *Julian Year*, and the *Gregorian* it self wanted Two Days of being right, they reckoning but Ten, having gone no farther back than to the Council of *Nice*; that is
that

that Year began Twelve Days nigher to the Summer, than it did at the first Fixation of it; and therefore, because the *Equinoxes* and *Easter*, which is fixed to the Moon, were grown so much out of Course, it being apparent by Astronomical Observation, that the *Equinox* had fled back from the 21st of *March* to the 11th of *March*; So that there happen'd to be Two *Easters* in one Year, or within the Compass of 365 Days, (as it still happens in *England*, we reckoning by the *Old Stile*, or *Julian Calendar*; by which sometimes there is Five Weeks Difference, between the Canon for it in the *Common-Prayer-Book* and the Almanack, as it was in the Year 1663. and it has differ'd a Week more than 20 Times since the Year 1600. and in the Years 2437, 2467, 2491, there will be an Error of 42 Days; and not long after that, of 49 Days: And if the old Calendar remain in Use 'till the Year 2698, it will never more happen according to the Rule of the Church.

Pope Gregory the 13th. by the Assistance of *Antonius Lilius*, his Brothers, and other eminent Mathematicians, set about regulating this Disorder Anno Dom. 1582. correcting the *Roman Calendar*, appointing that the Year shou'd contain but 365 Days, 9 Hours, 49 Minutes, 12 Seconds, and that the Vernal *Equinox*, which was then on the 11th. of *March*,

shou'd be brought up again to the 21st of *March*, as it was at the Time of the First Council of *Nice*; And to effect this he ordered, that Ten whole Days shou'd totally be left out of *October*, from the Fourth to the Fourteenth Day; so that the Fourth Day of *October* was reckoned the Fourteenth Day of *October* that Year 1582. And because the Sun still gains, as he did before, those that go by the *Gregorian* Account do still every Century or Hundred Years to reduce the *Equinoxes* one Day backward reckon one Day sooner than before; so that now since the Year 1700. till the Year 1800. they write Eleven whole Days before us; and the First of *January* with us is the Twelfth of *January* with them, as is visible in the following Tables. This is that which is called *New Stile* or *Gregorian Stile*.

Though this *Gregorian* Account is not so perfect as it should be, Being reduc'd no farther back than till the Council of *Nice*, about the Year 323 *post Christum*, and still wanted Two Days of right; whereas it ought to have been reduced to the Time of Christ's Birth. Yet the Quantity of the *Gregorian* Year 365 Days 5 Hours, and 49 Minutes, &c. agrees better with the Heavenly Motions, and the *Equinoxes* and *Solstices* are more firmly fixed by it, and *Easter* Celebrated more according to the Direction and
Mind

Mind of the *Nicene* Council, than by the *Julian* Account of 365 Days, 6 Hours; and therefore does and will bear away the Garland from it, and makes it be esteemed as a Stranger to Truth.

Of Months

MONTHS are so call'd by an easie Derivation from the Moon, and are either Natural or Artificial: Artificial are such as contain a certain Number of Days, as 30, of which Sort are the *Egyptian* Months, or sometimes 31 &c. as those in Use with us in *Europe*, and principally respect the Time when the Sun enters into the twelve Dodecatemories of the *Zodiack*. The Natural or Lunar Months are constituted by the Motion of the Moon, and are of three Sorts *Periodical*, *Synodical*, or *Appearing*. The *Periodical* Month is that Space of Time in which the Moon returns to the same Place in the *Zodiack*, from whence she departed. The *Synodical* is the Time or Interval from one Conjunction of the Sun and Moon to the next following; And the Month of *Phasis* or Appearance is the Time from her being first Visible after her Change, to her last Day of being visible before her next Synod, which may be greater or lesser according to her Motion and Declination.

Of

Of Weeks.

THE Division of Time by Weeks is very Ancient, probably as the finish'd Universe, distinguish'd into this Period by Gods making the World in six Days, and resting the Seventh; a Number much regarded by God in instituting Times, as seven Days in the Week, seven Times seven Days from the Passover to Pentecost, the seventh Year of Rest and Remission, and seven Times seven Years between the grand Jubilees. It obtain'd very early in the World, and has gain'd a general Use by most civiliz'd Nations; there being but few that observe not some one Day in a Septenary Revolution, as a stated Time of Worship, tho' they differ in the precise Day of the Seven, the *Turks* and *Mahometans* keep the sixth Day of the Week or Friday, the *Jews* or *Sabbatists* the seventh Day or Saturday, and the Generality of Christians the first Day of the Week, or *Sunday*.

Of Days.

DAYS are either Natural or Artificial; the Natural Day is that Space of Time, that the Sun takes up in making his Revolution about the Earth, which
Day

Day includes both the dark and light Part, beginning at the Evening and ending at Evening following, according to *Gen. 1. ver 5, 8, 13, &c.* Which the *Jews* begin about Sun setting. The *Caldeans* on the contrary begin at Sun rising and end at Sun rising; the *Romans* at Midnight, and *Astronomers* at Noon.

The Artificial Day is the Space of Time from Sun rising to Sun setting, all that Time that the Sun remains above the *Horizon*, and the Artificial Night contains the Time from Sun setting to Sun rising; the Time that the Sun lies hid under the *Horizon*; and the Days both Natural and Artificial do not only vary in the Quantity of the dark and light Parts thereof, but differ among themselves in the Quantity of Time they contain, which is sometimes 24 Hours, sometimes less than 24 Hours, and sometimes more than 24 Hours, which Inequality is occasioned as below.

Of the Increase and Decrease of Day & Night.

THOSE Places, that are situated under or near the *Equinoctial*, as about the Middle of the Globe, having their Poles in the *Horizon*, have their Days and Nights either equal or with very little Variation; but those who inhabit either *North*, or *South*, of the *Equinoctial*

noctial, have their Days, and Nights, sometimes longer, and sometimes shorter, according to their Distance *North*, or *South*, or the Obliquity of their Sphere. For by how much the Sun departs from the *Equinoctial North*, his Amplitude of rising, and Setting being increased, and his *Parallels* above the *Horizon* greater to us in *England*; and all on the North side the *Equinoctial*, the Days are lengthened, and the Nights grow shorter daily, 'till the Sun attains the Summer *Tropick*, or *Tropick of Cancer*, which is 23 Degrees 30 Minutes North of the *Equinoctial*, and the farthest Northern Station, and makes our longest Day and shortest Night.

So he returns again immediately back to the *Equinoctial*, his Amplitude decreasing again, and the *Parallels* of the Sun above the *Horizon* grow lesser, 'till he come to the *Equinoctial*, and then increase in *South* Declination; and by that Means the Days daily grow shorter and Nights longer, 'till he reach to his utmost *Southern* Station or *Tropick of Capricorn*, which is about *December* the 11th. when our Nights are longest and Days shortest.

Of the Difference of the Length of Days

THE Days do not only vary by increasing and decreasing into Light and Dark, but there is also a Difference in them

them in respect to the *Quantity* of Time they contain; for tho' we always reckon our Day 24 Hours long, yet they do not all the Year round contain the same Quantity, of Time or Minutes: but are some tho' but very few Days in the Year equal, and at other Times always either more or less according to the *Obliquity* or *Cross Position* of the *Zodiack* and *Equinoctial*; the *Meridian* Sun not always dividing the *Equinoctial* into equal Parts; this appears by Tables of the Sun's right *Ascensions* for it will be found that the right *Ascensions* belonging to 10 Days Motions of the Sun near the *Tropick* of *Capricorn*, amounts to 11 Days 30 Minutes. Whereas those of the same number of Degrees near the *Equinoctial* Points of *Aries* and *Libra* will scarce amount to 9.

So also do the right *Ascensions* of one *Tropick* differ from another (which Difference is caused by the *Excentricity* of the Earth and Sun's Center) as is found by Tables of the Sun's Motion, that he is but 179 Days in passing that Part of the *Ecliptick* between *Libra* and *Aries*, and 186 in passing that between *Aries* and *Libra* almost 7 Days more in passing the Summer half of the *Ecliptick*, then the Winter half. Which occasions some Days to be longer, or contain more Time than others; and accordingly Tables are calculated for the adjusting *Pendulum* Clocks and Watches, which

which tho' never so exactly made will not keep equal pace with the *Sun* or a true *Sundial*, but go faster or slower, according to the different Quantity of Time in a Day occasion'd as before.

Of the Names of Days.

THE Days were by the Ancient *Romans* named after the Seven Planets, which Names are retained by most *Europeans*, as well as us in *England*, allowing only the Difference of Language; and are as follows,

Of the Week the	1	Sun	Called in Latin Dies	<i>Solis</i>	From the Saxons	Sun	Called in English	Sunday
	2	Moon		<i>Lunæ</i>		Moon		Monday
	3	Mars		<i>Martis</i>		Tuisco		Tuesday
	4	Mercury		<i>Mercurii</i>		Woden		Wednesday
	5	Jupiter		<i>Jovis</i>		Thor		Thursday
	6	Venus		<i>Veneris</i>		Friga		Friday
	7	Saturn		<i>Saturni</i>		Seater		Saturday

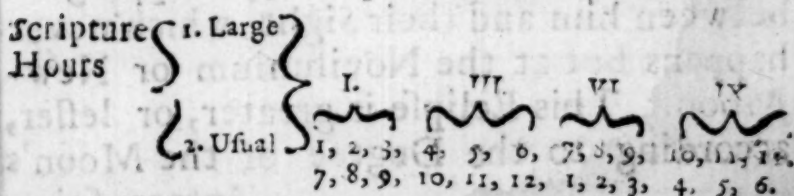
The *English* Names are those of *Saxon* Idols formerly worshipped in *England*, and supposed to have represented the Idols of the Seven Planets, or *Pagan* Gods of those Names they *Parallel*.

Of Hours.

HOURS are a Necessary, and *Artificial* Division of Time, not made by the Revolution of any Luminary, as *Years* and
Days

Days by the Sun, and Months by the Moon, they contain either a 24th Part of the Day and Night Natural, or a 12th Part of the Day and Night Artificial, which Hours are near equal, when the Sun is in the Equinoctial, but unequal, when the Sun has North or South Declination, to the other Days that are before, and after, and there being this Variation as has bin shew'd above, and we always allowing 24 Hours to the Day, the Quantity of the Hours must be that that in each suffers the Diminution, but besides the Natural Hour, there is an Artificial Planetary Hour, which has the same Diversity, according to the Position of the Place, and here with us, when our Days are 16 Hours long, by dividing the Light Part into 12 equal Parts, and the Dark into 12 equal Parts, the Hour Planetary will contain in the Day Time 1 Hour 20 Minutes, and in the Night but 40 Minutes; and *e contra* when our Days are but 8, and Nights 16 Hours long, then the Day Hours will be but 40 Minutes, and Night Hours one Hour and 20 Minutes long

A Parallel of Scripture Hours with ours.



answering to our Hours when the Sun is in the Equinoctial.

THE Jews used to divide the Day into 12 Hours, *John 11. 9. Are there not twelve Hours in the Day.*

But besides these they had another Sort of Great Hours of the Day, as first, second, third, fourth also of the Night, as first, second, third, fourth Watch; each of which contained three Hours, which are as you see in the Parallel, where all the Time betwixt Six and Nine is called the first Hour or Watch, and may serve to explain and reconcile *John 19: 14: And about the Sixth Hour. And Mark 15 5. And it was the Third Hour.*

Of Eclipses.

Eclipses are either of the Sun, or Moon, an Eclipse of the Sun is defined by Astronomers, *Interpositio Luminis Solaris perfecta ex Interpositione Luna inter Solem atque Aspectum Nostrum (ie.)* an Interception of the Sun's Light by the Interposition of the Moon between the Sun and our Sight.

So that the Sun it self suffers no Diminution of its Light, but only some Part of the Earth is deprived of his Lustre, by the Moon's opacous Body stepping in between him and their Sight, which never happens but at the Novilunium or New-Moon. This Eclipse is greater, or lesser, according to the Degree of the Moon's Interposition

Interposition, and therefore the Sun may be totally Eclipsed to some People, when others may see one half of him, and may be partially Eclipsed to some, and not at all to other Parts of the World.

An Eclipse of the Moon is defined by Astronomers. *Privatio Luminis in Luna Orta a Diametrica*i* Terra inter Solem & Lunam Oppositione*; A Privation of Light in the Moon caused by the Diametrical Opposition of the Earth between the Sun and Moon. The Moon is esteem'd by Astronomers to be a gross Opaque Body, having no Light in it self, but only reflects back the Light to us, the Sun darts upon her, therefore is called in Latin *Luna*, as tho' *Lux Aliena* borrow'd Light, and therefore her Eclipse may be Universal, and appear in all Places of the Earth of the same Quantity and Continuance, because she can never be Eclipsed but at the Full Moon when she has little or no Latitude, and is Diametrically opposite to the Sun, and when the Earth interposes in a right Line Casting her Shadow on the Moon, and thereby depriving her of the Sun's Light, which may be more, or less, according to the Moon's Latitude.

On JANUARY

January took its Name from the Latin Word *Janua* a Gate, the Month being, as it were, a Gate, or Inlet to the new Year; or rather from *Janus* the first King of the People called *Aborigines* in Italy, Anno Mundi 2629. Whom, some think, to have been the same with *Noah* or *Japhet* his Son, called *Janus*, from the Hebrew word *Jajin*, Wine, of which, he is supposed to be the first Inventer from *Gen. 2. 20.* *Numa* the Successor to *Romulus*, erected an Image to him with two Faces, intimating either that he looked back to the *Antidiluvian*, and forward to the *Postdiluvian* World, or alluding to his Prophetick Spirit, that he not only knew Things past, but foresaw Things to Come: or else in Reference to Time, his Two Faces, the one being withered, and hoary, shews Time past, the other youthfull and beardless, Time to come; he Consecrated also, a Temple to him, which was always shut up, when the *Romans* were at Peace, but stood open in the Time of War, and was shut at the Birth of our Saviour by *Augustus Caesar*, being the third Time, ever it had been so for 700 Years.

The first Day of the Year is observed on the Account of the *Circumcision of Christ*, which was to be on the 8th Day, according to *Gen. 17. 12.* And being the first of the *New Year*, gives the Name of *New Year's Gifts*, to those Presents that about this Time are given by one Friend to another, formerly called *Sirenæ* or Gifts given *Ominis Gratia*, or for good Luck's sake;

On the Calends, or first of *January*, the Emperor *Augustus* had Tribute annually paid him by his Subjects.

And at this Time Gold, Myrrh, and Frankincense, are offered to the Queen of England on this Day; and it is called a *Collar Day*, because
the

the Knights of the Garter, and Judges wear their Collars of S. S.

The Sixth of January is the Twelfth from December 25, and therefore called Twelfth-Day; And it is called Epiphany from Epiphaneia, Appearance, either because of our Saviour's Baptism, or the visible Opening of the Heavens at that Time, and Appearance of the Dove: or rather, as some think, from the Appearance of the Star, which Manifested our Saviour's Birth to the Gentiles, and was the Cause of the Coming of the 3 Magi, Melchior, Jasper, and Balthazar from the East to Palestine commonly called the 3 Kings of Colen in Germany, where they are said to be buried, who brought Gold, Myrrh, and Frankincense to our Saviour, a twelve Month after his Birth, and according to Tradition Melchior was an aged Man with a long Beard, who in Testimony of Christ's Regality, offer'd Gold to him as to a King; Jasper was a beardless Youth, who in acknowledgment of our Saviour's Divinity, offered Frankincense to him as to a God; Balthazar was a Moor with a large spreading beard, who presented him with Myrrh, as to a Man to be buried, ready for his Sepulchre, thereby signifying his Humanity, according to this Distich.

Tres Reges Regi Regum tria Dona ferebant

Myrrham Homini, Uncto Aurum, Thura dedere Deo.

In English

Three Kings, the King of Kings, three Gifts did bring,
Myrrh, Incense, Gold; as to God, Man and King.

4. The 25th is observed in Memory of the miraculous Conversion of that violent Persecutor St. Paul, who was smitten down with an invisible Hand from Heaven in his Career to Damascus, to Persecute the Primitive Christians, who became afterwards, the great Apostle of the Gentiles.

5. The Sundays after 12th Day to Septuagesima are Called the 1st, 2d, 3d, 4th, &c. after Epiphany.

On

On FEBRUARY

FEBRUARY is called in Latin *Februarius* from certain Feasts named *Februs*, anciently celebrated by the Romans, about the Beginning of this Month to *Pluto*, the Fabulous God of Hell, and other infernal Deities, for the Souls of their Ancestors. It is also called *Februs* from the *Februs*, which is derived from *Februando* Purgings, the Solemnity being as it were, Purgations, designed to pacify the restless Ghosts of their Ancestors, with lighted Tapers as a Sort of Penance. *February* contains this Year 28 Days, and begins on a Tuesday.

The 21 Day of this Month is called *Purificatio Sacre Virginis*, or the Day of the Purification of the Virgin Mary, according to *Levit. 12.* kept in Commemoration, both of the Purification of the Mother, and Presentation of our Saviour in the Temple, within 40 Days after her Delivery. It is also commonly called *Candle-Mass-Day*, probably from the Old Saxon Word *Candlemass*, the Mass or Feast of Candles. For before the Saying of Mass on this Day, it is a Custom in the Church of *Rome* to consecrate, or set apart for Use the Candles which they use in the Church all the ensuing Year. And they do also carry *Hallowed Candles* in Procession, in Memory of the Divine Light, wherewith our Saviour did illuminate the Universal Church.

It is one of those 4 Days called *Gaudy Days*, at the University, in the Colledges, and Grand Days in the Inns of Court, one of which falls out in every Term as *Candle-mass* in *Hilary*, *Holy Thursday* in *Easter*, *John the Baptist* in *Trinity*, and *All Saints* in *Michael-mass* Term. These 4 Days are no Days in the Courts at *Westminster*, and in the Inns of Court on those Days double Commons are allow'd, and Musick, and Revelling on *All-Saints*, and *Candle-mass-Day* as the first and last Day of *Christ-mass*. They are called *Gaudy Days*, either from the Latin Word *Gaudium*,

Gaudium Joy, because of the Joys, and Feasting in the *Inns of Court*, or else as some think from Judge *Gawdy*, who is said to have been the first Institutor of them. It is al'o a *Collar-Day*, because on it the Knights of the Garter, and Judges wear their Co'tars of *S. S.* The Sundays are the 6th and 13th and are called the 5th and 6th after Epiphany.

Valentine's-Day is the 14th of *February*, and falls out this Year on Monday; it is celebrated in Memory of *Valentine* a Roman Bishop: On this Day *Tutelarv Saints* and *Patrons* are used to be chosen by the *Papists*, And because about this Time of the Year, the Birds choose their Mates, Young Men and Maids imitate them in choosing *Valentines*.

St. Marthias's Day is the 29th of this Month, and is celebrated in Memory of *St. Marthias*, who was one of the 70 Disciples, and elected by Lot to be an Apostle in the Stead of *Judas*; he preached the Gospel in *Macedonia*, and after that travelled to *Judea*, where after he had been cruelly stoned by the *Jews*, he was beheaded after the *Roman Manner*, *Anno Christi*, 51. And this is one of Her Majesty's *Collar-Days* without Offering.

Sexagesima (i. e.) the Sixtieth, is the first Sunday before *Shrove Sunday*, and is the 27th Instant; it is added to make up the Deficiency of *Lent*, on the Account of Friday, on which because of the Lord's Supper and Ascension, *Melchisedes* Bishop of *Rome* forbade to fast. He lived *Anno Dom.* 311.

Septuagesima, Seventieth is always accounted the last Sunday after *Epiphany* and that and *Sexagesima* and *Quinquagesima*, have their Names from the Order in which they preceed the Fast of *Lent*, called *Quadragesima*, being a Fast of 40 Days before *Easter*. But because the Churches of *Asia*, and some others, as *St. Austin* observes, grounding their Practice on an Apostolical Tradition, would not fast on Saturday, this was added to supply the Seven Days of *Sexagesima*.

On M A R C H

March is derived from the Latin *Martius*, as it was called by *Romulus*, the First Founder of the City of *Rome*, and the first Institutor of the Year to the *Latines*, in Honour of *Mars* his teigned Father, by whom the vestal Virgin *Rhea*, is storyed to have been impregnated with him and his Brother *Remus*.

The First Day of this Month is called *St Davids*, vulgarly *Taffy's-Day*, and celebrated in Memory of *St. David*, a Learned Bishop of *Menevy* in *Pembrookshire*, which Place is now called *St. Davids* in Honour to his Memory.

The Ancient *Britains*, or *Welsh-Men*, do on this Day wear a Leek in their Hats, in Memory of a signal Victory obtained by them over the *Saxons*, at which Battle by this Prelate's Order, they wore a Leek in their Hats for Distinction, and Colours. He lived in the 6th Century, and died aged 140 Years.

Shrove-Sunday receives its Name from the *Saxon* Word *Shrive*, or *Shrift*, and the *Belgick Tide* or *Tijdt*; it being a Time of Shriving, or Confessing of Sins, because about this Time, the *Roman-Catholicks* do use to Confess their Sins, and receive the Sacrament, in Order to a more Religious Observation of the approaching *Lent*.

It is likewise called *Quadragesima*, *Fiftieth*, and was instituted by *Telesphorus* Bishop of *Rome*. Anno 142. to be observed by the Clergy, as an Addition to the *Quadragesimal Fast* of *Lent*, which begins on *Ash-Wednesday*, that as the Clergy preceeded the Laity in Dignity, so they might also in Sanctity.

Ash-Wednesday is the Beginning of *Lent*, it is called *Ash-Wednesday* from a Custom in the Church of *Rome*, of Sprinkling the People with, or signing them on the Forehead with the Form of the Cross,
with

with Consecrated Ashes, that were, made of the Palms Consecrated the Sunday twelve Month before, with this wholesome Monition, *Memento homo quod pulvis es.* &c. Remember Man that thou art Dust, and shalt turn to Dust. It is said to have been in use *Anno. 420.*

On the 10th the Sun enters the Equinoctial, and makes the Day and Night equal.

The First Sunday in *Lent* is called *Quadragesima*, i. e. the 40th, i. e. a Fast of 40 days in imitation of our Saviours Fasting 40 Days in the Desert: This Fast is called *Lent*, from the *Saxon* word *Lenit Moner*, or the Time when the Days do considerably encrease in Length, and exceed the Nights. It is said to have been Instituted by *Ercombert*, the 7th King of *Kent*, *Anno Christi 641.*

The next Week after *Ash-Wednesday* is called *Ember-Week*, so called from an Antient Custom of eating nothing on those Days, till Night, but a Cake baked in the Embers.

There are 4 of them in every Year, and formerly they on those Weeks fast *Wednesday*, *Friday*, and *Saturday*, and they happen according to this Distick.

*Post cineres Pentec: Post Crucem Postque Luciam,
Mercurii, Veneris Sabbati, Fejunia Fiant,*

That is the Weeks after *Ash-Wednesday*, *Whitsunday*, *Holy-Rhood-Day*, and *St. Lucy's-Day*.

The 2d Sunday in *Lent* is called *Reminiscere*, from the Beginning of the 5th. Ver. of the 25th Psal. *Reminiscere miserationum tuarum domine.*

The 25th of *March*, or *Lady-Day*, is celebrated in Memory of the Embassy of the Angel *Gabriel*, *Luke 1. 31. 32.* to the Blessed Virgin *Mary*.

The 2d Sunday in *Lent* is called *Oculi*, from the beginning of the 14th Ver. of 25th. Psal. *Oculi mei semper ad Dominum, &c.*

On APRIL

APril is so called either from *Aphrodite*, the Name of *Venus*, as *Ovid* sings in this Verse,

*Martis erat primus Mensis, Venerisq; secundus;
Hæc Generis Princeps, ipsius ille Pater.*

Or else from *Aperiendo*, Opening, because the Pores of the Earth, which have bin shut by the preceeding Winter are now opened.

2. The 4th Sunday in *Lent* is called *Latare*, from *Isa.* 6. 16. *Latare cum Jerusalem*, &c. It is called likewise *Midlent* Sunday. And also *Dominica de Rosa*, from a golden Rose, that the Pope carries in his Hand, when he walks before the People in *St. Peter's* Church at *Rome*. And *Dominica de Panibus Resurrectionis*; because of the miraculous Feeding of the People with the 5 Loaves, the History of which in the Gospel is explained on that Day.

The 5th Sunday in *Lent* is called *Judica* from the Entrance of the 43d Psalm, Ver. 1, 2, 3. *Judica me Deus* &c.

The 6th Sunday in *Lent* is called *Palm-Sunday*, *Dominica Palmarum*, or *Dominica Magna*, and is always the next Sunday before *Easter* Sunday.

It is called *Palm-Sunday*, from the Palm Branches which the Jews strew'd under our Saviour when he rode to *Jerusalem*, amidst their Acclamations *HOSANNA* thou Son of David, *Mat.* 21. 25. Which is imitated Annually by the *Roman Catholics*.

The Thursday before *Easter* is called *Maundy Thursday* from *Mandatum* (i. e.) the Command that *Christ* gave to the Disciples after his last Supper of washing one anothers Feet, which Custom is annually Commemorated at *White-hall*, to the *Queen's* Pensioners by those belonging to the Office, called the *Maundy*.

The

The next to this, is *Good Friday* observed in Commemoration of our Saviour's Crucifixion on Friday. *Easter Sunday* is said to have been called *Easter*, from *Eoster* a Goddess worshipped by the Ancient Saxons, whose Feast was celebrated usually in this Month.

This Feast was commanded to be observed by *Constantine*, and the Council of *Nice*, Anno 322. On the Sunday next following the first Full Moon after the Vernal Equinox, which is at the 11th of *March*: But it was not above 7 Years before, there arose a great Controversy between the *Greek* and *Latin* Churches, concerning it, the Churches of *Asia Minor*, celebrating it on the 14th of *Nisan*, as the *Jews* did, and the Western Churches on Sunday as above.

This Controversy was vigorously manag'd on both Sides, and disturb'd the Peace of the Church for 200. Years till the Time of *Dionysius*, who in the Time of *Justinian* set about this Regulation of *Easter*, which Regulation was confirmed by the Council of *Calcedon*.

St. George the Martyr of *Cappadocia*, and Patron of *England* is Honour'd with an Anniversary Day on the 23d Instant. Some have endeavour'd to render the History of this Doughty Knight an Allegory. For how this Saint and Martyr became a Cavalier, and when, and where he did those brave Exploits as to deserve to be made the Patron of *England*, and to be of the Higheft Order of Knight-hood, instead of determining, I refer to this Verse on his Chivalry.

*St. George to save a Maid, the Dragon slew
A Pretty Tale, if all that's told be true
Some say, there are no Dragons, and 'tis said
There was no George, I wish there was a Maid.*

St. Mark the Evangelist, who was Patriarch of *Alexandria*, and martyr'd in the Time of *Trajan*, is commemorated on the 25th Instant.

On M A Y.

MA Y in Latin *Majus*, was so called by *Numa Pompilius*, either from *Majores*, the Elders according as *Ovid* sings,

*Tertius a Senibus, Juvenum de nomine quartus
Quæ sequitur numero turba notata fuit.*

Or as others suppose, from *Maja*, the Mother of *Mercury*, the Messenger of the Gods, to whom, and to his Mother *Maja*, the Merchants of *Rome* used to do Sacrifice in this Month.

1. Milk-Maids celebrate the first of this Month with Musick and Garlands, and the Country People by Dancing round *May-Poles*, and so keep up the Relicks of the *Roman Floralia*, celebrated with green Boughs and Flowers to the famous Strumpet *Cloris Flora*, who Dying, bequeathed all her Riches to the City of *Rome*. It is also called *Philip* and *Jacob*, in Memory of the Two Apostles, *Philip* that Converted the Eunuch, *Acts* 8. Who was Crucified at *Hieropolis*, Anno Christi, 53. And *James* by the Latin Name *Jacobus*, who was surnamed the *Fishi*, wrote the Epistle of that Name, was Bishop of *Jerusalem*, and suffered Martyrdom the 7th Year of *Nero's* Tyranny.

Next follows the *Quinquagesimal* Interval of 50 Days between *Easter*, and *Whitsundide*, which was observed by the Primitive Christians as one Intire Festival in Honour of the Resurrection, and Ascension of our Saviour, with great Joy and Rejoycing, and contains 6 Sundays.

The First Sunday after *Easter* is called *Low-Sunday*, because it is a Low Festival in Comparison of *Easter-Day*, that precedes it.

Observations on Time.

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It is also called *Quasi modo geniti*, from the Entrance in 1 Pet. 2. 2. *Quasi modo geniti Infantes*, &c.

And *Dominica in Albis*, in regard of the Angels, that appeared in white Garments at our Saviour's Resurrection; and perhaps thence it was, that the Catechumens in the Primitive Church after Baptism wore white Garments, of which they were solemnly divested on this Day in the Church, and receiving the Bishop's Confirmation put on other white Garments.

The 2d Sunday is called *Misericordia* from Psalm. 32. 1. *Misericordia Domini plena est Terra*.

The 3d Sunday after Easter is called *Jubilate*, from the beginning of Psalm 65. *Jubilate Domino Deo omnis Terra*, &c.

The 4th Sunday is called *Cantate*, from the Entrance of the 98th Psalm, *Cantate Domino Canticum Novum*, &c.

The 5th Sunday after Easter is called *Rogation Sunday*, and takes its Name a *Rogando Deum*, from the Extraordinary Prayers, that used to be performed on the Monday, Tuesday, and Wednesday the Week following, and Abstinence from Eating of Flesh, for the Reasons following.

1. As a Preparation for the Devotion of the Thursday following being *Holy-Thursday*.

2. Because of the Fruits of the Earth, which are now tender, that they might not be blasted.

3. By Reason of Campaigns, which are usually opened about this Time.

It was first Instituted by Mamercus Bishop of Vienne in France, Anno 452.

On J U N E

JUNE in Latin *Junius*, is so Named from the Goddess *Juno*, or from *Juniores*, which signifies Young Persons, according to *Ovid-Juvenum de nomine quartus*.

Ascension-Day, or *Holy-Thursd*ay, is Just 40 Days after *Easter*, or the Resurrection of Christ, observed in Remembrance of our Saviour's Ascension up to Heaven in the sight of the Apostles, and Disciples, according to *Acts* 1. 9. And is the End of his Time, and Consummation of all he did, and taught here upon Earth, and therefore the Antients termed it, *Clausula totius Itinerarii Filii Dei*, the End of the Journal of the Son of God, in the Great Work of the Redemption of Mankind. It is likewise Called *Holy-Thursd*ay, because of the Holy Work of Christ's Ascension performed on this Day, it is likewise one of Her Majesty's Collar Days.

The next Sunday before *Whitsunday*, is called *Exaudi*, from *Psalms* 27. *Exaudi Domine vocem meam*.

The 11th Day is devoted to the Memory of *St. Barnabas*, Born in the Island of *Cyprus*, Colleague with *St. Paul* under the Institution of *Gamaliel*, and *Paul's* Fellow Traveller, he was teaching at *Salamis*, and stoned. This is the *Summer Solstice*, the utmost Northern Bound, to which when the Sun comes, he makes our longest Day and shortest Night, and is the true *Midsummer Day*; tho' it be not reckon'd till the 24th of this Month. When the Sun comes to this Northern Tropick, it returns back again to the Southward.

Seven Weeks after *Easter* is *Whitsunday*, observed either in Imitation of the Jewish Pentecost: Or in Memory of the Effusion of the Holy Ghost, upon the Disciples, *Acts* 2. It is called *Whitsunday*, either from

from the *Saxon* Word *Wied* or *Wibed* signifying *sacred*; or because of the *Catechumeni*, (or young Professors) in the Antient Church, who used, at this Time, to be apparrelled in White, and admitted unto *Baptism*.

The Week after *Whitsuntide* is called *Ember-week*, of which you may read before.

The 19th Day of this Month is called *Trinity Sunday*, and is always the *Octave* or *Sunday* following *Whitsunday*. It is observ'd in Honour of the Blessed *Trinity*: It was first instituted by *Gregory* the 4th, *Anno* 827. This is the Time when Marriage comes in again, which is prohibited by the Church from the first Day in *Rogation Week* (for the Reasons there mentioned) till this Day.

The *Sundays* are reckoned First, Second, Third, &c. after *Trinity*, till you come to *Advent Sunday*.

The 24th is called *Midsummer*, and is observed in Honour of *John* the *Baptist*, our Lords Fore-runner or *Harbinger*, who was Beheaded by *Herod*, *Anno Dom.* 30. By Reason of the Procession of the *Equinoxes*, the Solstices are got out of Place, and as our Saviour is supposed to have been Born about the Winter Solstice, or when the Sun enters *Capricorn*, which is about the 11th of *December*, and is now got out of Place, as far as from thence to the 25th, so the Summer Solstice is distant from *Midsummer Day*, that is about 14 Days Time, so that it is now only *Midsummer* in Name and not in Season.

The 29th is celebrated in the joint Memory of those two great Apostles *St. Peter* of the *Jews*, and *St. Paul* of the *Gentiles*, the former Crucified at *Rome* by *Nero*, with his Head down-wards, and *St. Paul* Beheaded by the same, at the same Time, and both Buried together.

It is also observed in Memory of the Nativity of King *Charles* the 2d, born on this Day *Anno* 1630. and Commanded by Act of Parliament on Account of his Restoration. *Anno* 1660.

On JULY.

THis Month of *July*, since the Addition of the two Months *January* and *February* to the Old *Roman* Year, is the 7th Month in Order, but formerly when the Year began at *March* was but the 5th, and was therefore called in Latin *Quintilis*, from *Quintus*, but afterwards it was in Honour to *Julius Caesar*, who was made Dictator in *Quintilis*, named *Julius*, and thence in English *July*.

1. *St. Swithin* is remembred on the 15th Day of *July*, he was an Holy Bishop of *Winchester*, Anno 860, the Country Folks call him Weeping *St. Swithin*, because two Rainy Constellations called *Prosepe* and *Aselli*, rise cosmically in the Sign *Cancer* about this Time, and commonly produce much Rain.

2. On the 19th the Dog-Star called *Sirius*, from the Greek *Seiranein*, h. e. *siccando* (because of his drying Quality; *propterea quod & Fluvios & Fontes nimio Calore exicret*) because it dries up the Rivers and Fountains, (rises cosmically or with the Sun) it is called *Canicula*, the Days *Dies Caniculares*, or Dog Days; which then begin.

3. In the 2^d Year of Queen *Elizabeth*, 1580. the never to be forgotten *Spanish Invasion* may be remembred, when *Don Alphonso* Duke of *Medina* brought a Navy, falsely Chritened by the Pope, with the Name of *Invincible*, consisting of 130 Ships, 19290 Souldiers, 8050 Mariners, 083 Galley Slaves 2600 Great Ordinance, to subjugate to *Popish Tyranny* and *Idolatri* our Native Country; which by the Magnanimity and wise Management of Queen *Elizabeth*, the Courage of the Lord *Charles Howard* High Admiral, Sir *Francis Drake* Vice Admiral, and watchful Care of the Generals, the Earl of *Leicester* and Lord *Hunsdon* by Land, was beaten, half their Ships taken and sunk and the rest stole homeward round *Britain* by *Scotland*, the *Orkneys*, and *Ireland* and got back to *Spain*, with what Ships they had left, with as great Disgrace, as they had set out with Ostentation

The

4. The Manner of which was as follows, The Spanish Navy appearing on the English Coast first of all on the 21st of July, having been retarded by stress of Weather ever since May. The Queen had Opportunity to make timely Provision.

And accordingly she ordered 20000 Souldiers to guard our Southern Coasts, and two Bodies more of 1000 Horse and 22000 Foot under the Command of the Earl of *Leicester* encamped at *Tilbury*, and another Body of 24000 Foot and 2000 Horse under the Command of the Lord *Hunsdon*, who guarded her Majesty's Person, these defended the Mouth of the River of *Thames*

And in the mean Time the Lord *Charles Howard*, Lord Admiral of the whole Navy, and Sir *Francis Drake* Vice Admiral, were ordered to expect their Arrival at *Plimouth*, and because the Duke of *Parma*, with an Army of 40000 thousand lay ready to embark to assist the Spaniards in this Expedition, the Lord *Henry Seymour*, with 40 English and Dutch Ships, were ordered to guard the Coasts of the *Netherlands*, and keep them from coming out.

Things being thus disposed upon the Appearance of this Armado, the Admiral of *England* sail'd out of *Plimouth* to receive them, and sent a Pinnace called the *Defiance* before him, which gave the Spaniards a Challenge to fight by Discharge of great Shot, which they answering there ensued an Engagement, wherein the English Ships had the better: which Fight was renew'd again the 2d of this Month with little Loss on either side: The 24th they both lay by, & the 25th renewed the Fight, and the Spaniards again received the worst, and held on their Course, and on the 27th cast Anchor near *Calice*, expecting the Prince of *Parma*, but finding no Hope of his Assistance and wanting many Necessaries, after Sir *Francis Drake* had made Fire Ships of 8 of his worst Vessels. He sent them in the Night among the Spanish Fleet, which not only destroy'd several, but put them into such Confusion, they cut their Cables, and fell foul upon one another.

On A U G U S T

THis Month was called in *Latin* *Sextilis* from *Sextus* the Sixth, it being so from *March*, but afterwards in Honour of *Augustus Caesar* it was called *August*; because in the Month *Sextilis* he was first created Consul.

The First of this Month bears the Name of *Lammas* in *Almanacks*, and is thought by some to have taken its Name from the *Saxon* *Hlar Masse*, i. e. *Loaf Mass*, or *Bread Mass*, as a Festival Gratulatory to God for the first Fruits of Harvest, which was performed with Bread made of New Wheat. It is in some Places still a Custom for Tenants, to bring their Lord before the first of *August* that Years Wheat. But others by a more easie Etimology derive *Lammas*, as tho' *Lamb Mass*, from a Custom anciently in *England* in Popish Times, that Tenants holding Lands of the Cathedral Church in *York*, dedicated to *St. Peter ad Vincula*, were obliged by their Tenure, to bring on that Day a *Lamb* alive into the Church, while they were singing *High-Mass*.

The Cathedral in the City of *York*, that goes under the Name of *St. Peter ad Vincula*, is said to have been erected by Pope *Alexander* the 6th, in Memory of a signal Cure wrought by the Means of those Chains, that *St. Peter* was bound with in the Time of the Emperor *Nero*.

Which some of the Roman Catholicks thus relate, That there was a certain Tribune of the City of *Rome*, whose Daughter was grievously afflicted with a painful Disease in her Throat, which resisting the Efficacy of all other Means used for her Recovery, he requested of the Pope, that he wou'd permit his Daughter the Sight of the Chains, in which *St. Peter* had been bound, which Request was granted, and his Daughter kissing the Chains, was miraculously heal'd of that pertinacious Distemper,

per, upon which wonderful Effect, the Roman Tribune *Quirinus*, with his whole Family, were so convinc'd of the Truth of the Christian Religion, that they all were converted to the Faith of Christ, and were baptiz'd into the Christian Religion, and the Pope, therefore, to perpetuate the Memory of so remarkable a Providence, erected a Cathedral, which he call'd *St. Peter ad Vincula* and there reposit'd those Chains of *St. Peter* and instituted the first Day of *August* to be celebrated in its Memory, which was called the *Gule*, or *Tule* of *August*, either from the *British* Word *Gwyl-Awst*, i. e. The Feast of *August*, or from *Gule*, from the Latin *Gula*, or Throat, from that Part of the Tribune's Daughter that had been heap'd by those Chains.

The *Sundays* in this Month, are call'd the 7th, 8th, 9th, 10th after *Trinity*.

St. Bartholomew comes into Remembrance on the 24th, who was, as some say, Nephew (if not Heir) to a King of *Syria*, that preached the glad Tydings of the Gospel to the *Indians*, where he by the Command of *Polemius* King of *India*, was sorely beaten with Cudgels, and the next Day fled alive and crucify'd, and at last beheaded, thus dying both Apostle and Martyr, *Anno Christi* 51.

On *Munday* the 27th, *Sirius* the Dog-star that rose cosmically (with the Sun) the 19th of *July* proceeding, which was so call'd either as before, or *ὅτι τὸ σερῆν*, *ab evacuando*; quod corpora nostra sudoribus evacuet; because he cleanseth our Bodies by Sweat, having traversed his Course in our Region bids us farewell, and so the sultry Season, called the *Dog-Days* ends.

The 29th commemorates the Decollation of *John* the Baptist, beheaded by *Herod* at the Request of *Herodias*, the Daughter of *Herod's* Brother *Philip's* Wife, whom he unlawfully kept according to the Relation. *Mat.* 14.

On SEPTEMBER.

September in Latin *Septembris*, from *Septem* Seven. An Act of Parliament has constituted the 2^d Instant, a Fast on the Account of that dreadful Conflagration of this Famous City of *London*, the *Metropolis* of *England*, and *Emperium* of *Europe* in 1666. treacherously fir'd by a Popish Conspiracy, there being 23 Accomplices. It begun in the House of Mr. *Farryner*, a Baker (fired by *Robert Hubert* a Native of *Roin* in *Normandy*, and his Partner *Piedlo*) in *Pudding Lane*, near which the Monument is erected in Memory of that horrid Action, whereby 13200 Houses, were in 4 Days Time reduced to Ashes.

Days and Nights are equal on the Eleventh. The Sun now having visited the farthest Southern Stage, or Tropick of *Capricorn*, it comes back again to the imaginary Line in the Heavens, called the *Equinoctial Line*, or *Circle*; which is just in the Midst of the Globe, equi-distant from both the Poles, North and South, which he traverses twice a Year at the 11th of *March*, which is called the *Vernal Æquinox*, and the 11th of *September*, which is called the *Autumnal Æquinox*; and when he comes to that Point, he makes Day and Night equal throughout the Universe (except to the Inhabitants directly under the Poles.

3. The *Exaltatio Crucis*, or *Holy Rood Day* has the 14th Instant assign'd to its Memory, *Rood* in old *Saxon* signifies either the Cross, or the Picture of *Christ* on the Cross: It is called *Exaltatio Crucis*, or the Exaltation of the Cross, because (as *St. Helen* the Mother of *Constantine* the Great, having found the Cross after it had been bury'd in the Earth by the *Painims* 180 Years, had the 3^d of *May* assign'd to its Memory under the Title of *Inventio Crucis*, or the finding of the Cross.) The Emperor *Heraclitus* after he had regain'd it a 2^d Time from the *Persians*, who had kept it 14 Years, carry'd it on his

his Shoulders to Mount *Calvary*, and there set it up with extraordinary Solemnity.

This next Week is called *Ember Week* the 3d, the two former being the next after *Ash-Wednesday* and *Whitsunday*. They are of great Antiquity in the Church, being observ'd as Times of Publick Prayer, Fasting and Proceſſion, and were called by the Ancient Fathers *Quatuor Anni Tempora*, being appointed as Quarterly Seasons of Devotion proportioned to the 4 Seasons of the Year, *Spring, Summer, Autumn* and *Winter*, in Order to implore a Blessing on the whole Year.

*Post Cineres, Pentec, post Crucem, postque Luciam
Mercurii Veneris, Sabbathi jejunia fiant.*

St. Matthew the Evangelist is honoured with the 21st. This Apostle, who was a Jew by Birth, and a Publican by Profession, was one of the four Secretaries of our Lord Christ, who wrote one of the Gospels, called the Gospel of *St. Matthew* in the *Hebrew Language* (as is believ'd) and deliver'd it to *James*, the Brother of Christ at that Time Bishop of *Jerusalem*, being first converted to the Christian Faith by our Saviour, according to *Mat. 9. 9.*

He afterwards travel'd into *Ethiopia*, where he is said to have been kindly entertain'd by that Eunuch, that was Chamberlain to *Candace*, the Queen of *Ethiopia*, we read of *Acts 27.* and was so successful as by his Preaching in *Ethiopia*, he converted King *Æglippus*, and his People to Baptism, but afterwards was run thro' with a Sword at the Command of his Successor *Hyrtacus*. *Anno Dom. 71.*

St. Michael the Arch-Angel, in the *Hebrew*, who is like God, Names the 29th, and is called *Michaelmas*, either from the Masses formerly used to be said on this Day, or the *Saxon Mass*, signifying a Feast in Honour of *St. Michael* Prince of the Heavenly Host, and one of the Nine Orders of Spirits.

ON OCTOBER.

OCTOBER in Latin *Octobris*, is derived from *Octo* Eight, this having been the 8th Month from *March*, the ancient Beginning of the *Roman* Year.

1. The *Sundays* in this Month are called the 15, 16, 17, after *Trinity*.

2. St. *Luke* the Evangelist has the 18th of *October* Consecrated to his Memory. He was by Birth a *Syrian*, by Profession at *Antioch* a Physician, and afterwards became an Historian, and wrote the Gospel that bears his Name, and that of the Acts of the Apostles. He died at *Ephesus*, Anno Christi 74. in the 84th Year of his Age, where he was entombed; till together with *Andrew's* and *Philips's*, his Relicks were in the Reign of *Constantius*, the Son of *Constantine* the Great, translated to *Constantinople*.

3. St. *Ursula* claims the 21st. A Saint had in great Honour formerly, and still retain'd in the Calendar. It was kept solemnly in Memory of a Religious *British* Virgin, who was most inhumanly Martyred by *Avila* a bold *Scythian*, King of the *Huns*, who over-ran *Italy*, and *Gallia*, and at last by the Intreaty of Pope *Leo*, retired to *Hungary*.

4. On the 23d of this Instant, *Michaelmas's* Term begins.

5. St. *Simon* and *Jude* are joyntly presented with the 28th Instant; *Simon* called *Zelotes*, was born in *Canā* of *Galilee*, the Son of *Mary* and *Cleophas*, the later surnamed *Thaddæus* and *Lebbæus*, Preached the Gospel at *Edeffa* a City of *Syria*, and throughout all *Mesopotamia*, till murdered at *Berytus* a City of *Phœnicia*, in the Reign of *Agbarus* King of *Edeffa*. *Simon* preached the Gospel in *Egypt* and *Persia*, and afterward succeeded St. *James* in the Bishoprick of *Jerusalem*, till he was Crucified in the 120th Year of his Age, in the Reign of *Iræjan* the Empe-

ror the last of the Apostles that suffered Martyrdom,

The 29th Day of this Instant, is the appointed Day for the sweating of the Lord Mayor elect for the City of London, who was elected on the *Michael-mass* Day before, when being attended by the Aldermen of the City on Horseback to the River of *Thames* at *Queen-street*, being preceeded by the Free-men of the City, in their Livery Gowns, each in their respective Companies with each their Proper Banners, and attended by the City Trained Bands, then he goes by Water in a Barge, being attended by the Companies in their Barges, with Drums, Trumpets, Hautboys, and other Instruments of Musick to the Court of *Exchequer*, and is sworn, and returning to *Black-Friars* by Water, is received by the City Trained Bands, and the Cavalcade is concluded by exposing of stately Pageants in a Triumphant Manner, and the Solemnity ended in Splendid Entertainment to each Company at their Respective Halls.

This Month affording but few Holy Days and less Matter, I shall supply that Defect by inserting here some Remarks in Relation to Vigils and Matins, as far as the Room will allow.

The Ancient Church, because the Apostles by Reason of their Dispersions and Persecutions not daring to appear in Publick, were forced to meet in Private Places, to exercise their Religion, did imitate this Custom by that Part of Service, that they called *Vigils*, (which are so called from the Latin *Vigilo*, to watch,) and therefore on the Eves or Evenings of High Solemnities in the Churches, and at the Tombs of Saints departed they came together, as also on the *Matins* which come from *Matutinus* the Morning.

The Night was divided into 4 Vigils, the 1st began at 6 in the Evening and lasted till 9 at Night, the 2d at 9 and lasted till 12, the 3d at 12 and continued till 3 in the Morning, and the 4th at 3 and continued till 6.

On NOVEMBER.

NOVEMBER in Latin *Novembris*, from *Novem* Nine, the Number of its Order.

1. The Year being too short to allow each Popish Saint a particular Day, this first of *November* makes up the Deficiency by the Name of *All-Saints*, or *All-Hallows Day*.

This is a Festival observed in Memory and Honour of all the Saints departed, that by this Obsequiousness they may obtain the Prayers and Patronage of them all

2. The 2d is dedicated to the Souls of all the faithful deceased, to free them from the Pains of Purgatory by the Joint Prayers of the Living, and obtain eternal Rest for them, and called *All-Souls Day*; the fore part of this Day is observ'd till Noon, and many of the wealthiest *Roman Catholics* in several Northern Counties of *England*, as *Lancashire*, &c. do still retain a Custom of giving *Soul-Mass-Cakes* to the poorer Sort, who in return, are to salute them with this Distich.

*God save your Soul
Beens and all.*

3. The 5th is the most Momentary of the *English* Holy Days, celebrated in Memory of a signal Delivery from a Popish Conspiracy, *Anno Dom. 1605*. the third of King *James* the First called *Gun Powder Treason* or *Plot*, when the King, Lords and Commons were designed to be blown up all together with Gun-Powder, and fall Victims to the Malice of implacable *Papists*, which was wonderfully and timely discovered and appointed a Day of Thanksgiving by Parliamentary Sanction; it is also dignified by the opportune Landing of the Prince of *Orange*, since King *William* the 3d of Blessed Memory, to rescue us from the impending Slavery, that then threatned this Nation from *Popish* Bigotry.

St.

4. *Clement*, St, *Paul's* Fellow Labourer, has obtain'd the 23d of this Month to be dedicated to his Memory, he converted the Roman Lady *Theodora*, and her Husband *Sisinnius*, the Kinsman and Favorite of the Emperor *Nerva* which excited a Grandee of *Rome*, *Torcutianus* to charge him with Magick to the Emperor and procured him to be banished to dig in the Mines : Where he converting many Slaves to the Christian Faith, was by *Aufidianus's* the Presidents Order cast into the Sea, the 3d Year of *Trajan's* Empire.

5. St. *Andrew* the Brother of *Simon Peter*, an Apostle brings up the Rear of *November*, he taught the Gospel to the *Scythians*, *Sacians*, and *Sagdians* and in many other Places; and in the Time of *Vespasian* was Martyred by *Ægeus* King of the *Edeffians*, Ann. Dom. 80.

The Sundays are reckoned the 20. 21. 22. Sundays after *Trinity* till *Advent* Sunday.

Advent Sunday takes its Name from the Latin Word *Adventus* as tho' *Adventus Domini in Carne* The Coming of the Lord in the Flesh, of these there are 4 which preceed the Nativity of our Lord, and were instituted by the Church in Order to prepare the Minds of Christians for a sober Life and to lead them to Meditation on the Birth of Christ whose Festival is then approaching.

Matins are derived from *Matutinus* the Morning *id est*. Morning Song, are a Service still used in Nunneries and Monasteries by the Nuns in the Morning.

There is also another Usage among them, a Service in the *Romish* Church called *Tenebrae* on the Thursday Friday and Saturday before the Easter Week and the Days *Tenebrae* Days or Days of Darkness in which they thus imick the Darkness that was at our Lord's Apprehension and Crucifixion.

Their Matins or Morning Service on those Days begun with Lights but ended in Darkness, representing the Night time when our Saviour was apprehended in the Garden of *Gethsemane*.

On DECEMBER.

DECEMBER in Latin *Decembris*, from *Decem* Ten, formerly the Tenth, now the 12th

2. The Sun enters *Capricorn* the 11th, and makes the shortest Day.

3. St. *Lucy* a Virgin Martyr is remembred on the 13th and the Week after is the last *Ember Week*.

4. On the 21st St. *Thomas* surnamed *Dydimus* is remembred, who was a Teacher of the *Parthians*, *Medes*, and *Persians*, *Caramanians*, *Hyrcanians*, and *Bactrians* and being at last mortally wounded with a Dart in the City *Calamina* in *India*, was there Honourably interr'd, *Anno Christi*, 35.

5. The Aptness of that Type to answer the Antitype, The Time of the Virgins Conception drawn from *Elizabeth's*; and the Courses of *Abia's* turn, and many Probabilities; but these being over-ruled by Tradition, 'tis fixed on 25th of *December*, which tho' it may answer to the Day of the Month, varies in the Season of the Year. Those that fix it, suppose it to have been upon or very near the Winter Solstice or Mid-winter Day i.e. *Decemb 11*. now: For so much as 14 Days the *Equinoxes* have gotten out of Place to these that go by the *Julian Account*.

6. The *Christians* of Old in the Ancient Latin Church called it *Luminaria* i.e. The Feast of Lights because of the many Tapers that used to be lighted on this Festival, in Allusion to our Saviour who was the Light of the World, the true Light of Lights that lighteth every Man that cometh into the World *John* 1. 9.

7. On the 25th is the Nativity of *Christ* Celebrated; tho' some contend that He was rather born at the Feast of *Tabernacles* about *September*, for which they urge many Arguments drawn from the Time of his Life, 33 Years and a Half, which he dying at the *Passover*, runs it back to *September* or *October*.

8. It is also called *Christmass* according to the Custom of the Ancient *Saxons*, from the *Masses* used to be said at that *Time*, who used to denote the *Times* from the *Masses* used to be said at them.

9. It is also called in the North of *England* *Yule-Tide* as some think from an Idol of the Ancient Inhabitants of this Kingdom called *Yule* whose Festival was celebrated much about that *Time*. But others think it is called *Yule-Tide* alluding to *Jubilum* in Latin which from the Ancient Hebrew *Jobel* signifies a *Time* of Joy and Festivity.

After *Christmass* *St. Stephen* the Protomartyr has his Station as an Attendant on *Christ*, who suffered *Anno Christi, 35.*

And *St. John's* waiting Day is upon the 27th, he wrote the Gospel; preach'd in *Asia*, was by *Trajan* banished to the Isle of *Patmos*, had there the Vision of the *Revelations*, lived 120 Years and died of an Apoplexy, *Anno 104.*

Upon the 28th the *Bethlehem* Children attend by the Name of Innocents, and adorn the Catalogue of Martyrs, among whom it is said was *Herod's* own Son which made *Augustus* say *Melius est Herodis Porcum quam Puerum esse.* It is better to be *Herod's* Hog than his Son.

These following Lines belong to Page 49

There are 15 Tapers lighted and set on a Candlestick, in Form of a Triangle, and in the Service there are 15 Canticles or Psalms and at the Conclusion of each of these Canticles, one of these Tapers are put out, and so gradually 'till they are all extinguished,

The Vigils that are at the Evenings of these Days they mimick the Darkness that was at our Lords Crucifixion, by extinguishing all their Lights, and the whole Office being concluded, after some Time of Silence, they make a great Noise on a sudden, to represent the rending of the Veil of the Temple.

Of the World.

THE World contains two Parts, the *Celestial* or *Aerial*, and *Terrestrial* or *Elementary*; namely, Heaven and Earth.

The *Celestial* Part Contains those glorious Bodies, the Sun, Moon, and other Planets, as well as fixed Stars.

Their Position in respect to one another, is suppos'd to be different by those that go by the *Ptolomaic* System, and those that approve of the *Copernican* System. *Ptolomy* supposing the Earth to be the Center of all the other Planets and Orbs, and *Copernicus* making the Sun to be the Center.

According to *Ptolomy's* System, the Sun moves round the Earth once in 24 Hours, and because of the vast Distance of his Orb from the Earth, he must move no less than 7570 English Miles in a Minute.

And upon this Center the Starry Firmament must also move round about the Earth in 24 Hours, and its Motion proportionable to its great Distance, a Star in the *Æquator* must move 209974 Miles in a Minute, as much as if one shou'd move about the Earth a 1000 Times in an Hour. This Motion being so prodigious, that if a Star shou'd fly so swift in the Air about the Earth, it's suppos'd that it wou'd burn, and consume all that is in the World, and made *Copernicus*, together with some other Reasons, attribute the Motion to the Earth, and suppos'd that the Orb

of the fixed Stars stood still, and that the Earth had a twofold Motion, the first its Daily Motion upon its own *Axis* turning round once in 24 Hours, which makes Day and Night; and the other is of the Earth's Motion in its Orb, which is performed in 365 Days 5 Hours, 49 Minutes *Fere* making the 4 Seasons of the Year.

But this must suffice at this Time of the Position and Motion of Heaven, and Earth, since I have not Place to be larger.

I shall next consider the Motion, Magnitude, and Distance from the Earth of the Planets, of which the nearest to the Earth, is the *Moon*.

The Planets are in Number 7, called Planets from *Planoo* to wander, they being wandering Stars.

The *Sun* is the greatest of all the Planets in Magnitude, Height, and Splendor, some compute him to be 343 Times bigger then the whole Earth: As for his Splendor he is called *Fons Lucis*, the Fountain of Light; as to his swift Motion, I have spoken elsewhere, he is called the Soul of the World, from the Excellency of his Influence, he makes the Seasons of the Year, Crowns all Places and Things with Beauty, and Verdure, animates all sublunary Bodies with Life, Heat, and Vigor, and under God is them ost Beneficent Creature in the universe, to all Things animate and inanimate.

The Moon is distant from the Earth, as
some

some Astronomers compute, 23236 Miles and makes her Revolution about the Earth in 24 Hours, goes in a Day 46757 Miles, in an Hour 1948 Miles, and in a Minute 30 Miles, and moves thro' the *Zodiack*, once in 27 Days 8 Hours *Fere*, and is also accounted to be less then the Earth 46 Times.

Mercury Moves about the Sun in 88 Days and by Reason of the Circuit of his Sphere, he moves 137040 Miles a Day, 5710 in an Hour, and 91 Miles a Minute, is less then the Earth 117 Times.

Venus is 26 Times less then the Earth and moves about *Mercury*, in 224 Days, in a Day 101712 Miles in an hour, 4238, and in a Minute 70 Miles.

Next above the Earth is the Orb of *Mars*, who encircles the *Sun* once in one Year, and 322 Days *Fere*, he is less then the Earth 55 Times, and moves in a Day 69842 Miles, in an Hour 2910, in a Minute 48 Miles.

Jupiter runs his Course in about 11 Years about the *Sun* and *Earth* both, he is greater then the Earth 9 Times, and moveth 17996 Miles a Day, 1583 in an Hour, and 26 Miles a Minute.

Saturn performs his Revolution about the Sun in about 30 *Egyptian* Years, he is greater thn the Earth 9 Times, Moves 15959 Miles a Day, 1498 an Hour, 25 Miles in a Minute.

This may suffice at Present for the Planets or Erratic Stars, let us next ascend to the Fixed Stars, and Contemplate them in
their

their Cerulean Frame: the Christalline Heaven called the Firmament or *Primum Mobile*; this is the Most Noble Part of the Universe as well for its nearest Approximation to the *Cælum Imperium*, the Residence of God, Angels and Rectify'd Spirits as also by Reason of its Innumerable Company of Glittering Stars (which incircling the terrestrial Orb at immeasurable Distances,) it sparkles in the the universal Expanse.

Concerning the Matter of the Stars Philosophers do Differ in their opinions, some supposing them to be truly of a Fiery Nature; others to be compounded of a Nature Partly Fiery, and partly Earthly. Some Imagine them to be of a Nature congenial with Vapours, and Exhalations, that is partly Aery, and partly Watery: But our Modern Astronomers conclude, that they are compounded of Elementary Matter, that is formed into Fiery Globes; that they are partly liquid, and partly solid, the liquid Matter being Fluid, and Moveable like Flame.

As to their Number they are Innumerable, but for the more Easy finding them in their Stations, many of them are formed into Constellations and have Names assigned to them, as *Aries*, *Taurus*, *Gemini*, &c. So that a Constellation is, only a Company of Stars standing near together, seeming to bear some Resemblance to the shape of the Creature, or Thing the Constellation bears the Name of.

As to the Distance of their Frame: This *Cerulean* Concameration of Stars, is so remote, it is not well known, but is such a vast Distance, that it Matters not to set down the Number, it being reckoned not to be less then 99999999 Miles.

These Stars also Differ in Magnitude, and therefore, are distinguished into Six Degrees, or Magnitudes.

And a Star of Magnitude	1	the Contains of the Body of Earth.	3932	Times.
	2		1220	
	3		260	
	4		216	
	5		92	
	6		64	

As to the Light of the Stars, *Philosophers* differ in their opinions; some suppose, that their Light is innate, in themselves, and that they shine with their own Light, as the Sun does: others again imagine, that they borrow their Light from the Irradiations of the Sun's Light as the Moon does.

And those that suppose the Light of the fixed Stars to be innate, do also imagine, that as the Sun has several Planets carried about him, so that these fixed Stars have other Mundane Bodies moving about them tho' we cannot discern them

And whereas they appear to us to sparkle or twinkle, some imagine, that it proceeds from that innate Light, that they are endowed with.

So that they sparkle and cast forth such
have

quick darted Rays, that our Sight can't behold them without a trembling Passion, others think, it is by Reason of their vast Distance, by which they are weakly beheld by our Eyes: others again suppose, their Twinkling to proceed from a constant Evibration of Lucid Matter, or a continual Expiration of Effluvia, or fiery Vapours, in the same Manner, as the Fulgurations, and Ebullitions in the Body of the Sun.

But I must now hasten down from this lofty Turret, and take a short Survey of the Terrestrial Part of this Universe, being the present Place of our Residence, and richly furnished by the Bountiful Creator, with an Infinite Variety of Creatures all subservient to, and for the Use of Mankind.

As to its Form, tho' (the Opinions of Philosophers, were formerly various, some supposing it to be a plain, others concave, some Cylindrical) it is now generally concluded, and that from demonstrable Reasons to be round, which reasons I cannot now stand to give.

As to the Matter of the Earth: We cannot tell what it is at, or near the Center; but what we know is near the Surface, where by digging, we find it is *Earth, Stone, Clay, Sand, Cole, Salt, Iron, Lead, Tin, Copper, Silver, Gold &c.*

The Peripatetic Philosophers conceive, that the Earth is made up of 4 Elements, *Water, Air, Earth* and *Fire*: Chymists make 3 Principles, *Salt, Sulphur,* and *Mercury*; Some others tell us, that the material Constitutive Parts of our habitable Globe are composed of *Earth, Water,* and *Air*; and that the thick Earth makes the Solidity of this Globe, and the Liquid Water penetrating into, do's bind together the Discontinuity of the Earthy Particles, and that the thin and subtil Air does by its ambient Quality encompass and bind together the Earth and Water, filling up the void Spaces that remain Vacant.

We have Reason to think, that the Land is one continued Substance, and that no Part of it is entirely separated from the Rest which is an irregular Shape and Figure, as well the Water, as the the Mountains, and it is divided in the General into

(1) *Continens*, which is a great Quantity of Land in which, many Countries, or Kingdoms joyn together.

(2.) *Islands*, which are Parts of the Earth encompassed round with Water.

(3.) *Peninsula's*, which are a Part of dry Land, almost encompassed round with Water, yet joyned to the firm Land, as *Africa* to *Asia*, the *Morea* to *Greece*.

(4.) *Isthmuses*, which are a narrow Neck of Land, between 2 Seas, joyning the *Peninsula* to the Continent, as that of *Corinth* in *Greece*, and *Darien* in *America*.

(5.) *Promontories*, which are high Hills, or a Part of Land, lying out as an Elbow into the Sea, the utmost End of which, is called a *Cape*, as *Cape de Verd* and the *Cape of good Hope*.

The Compass of the Terrestrial Globe of Earth and Seas under the *Æquinoctial*, is computed to be 21600 *English* Miles.

It is generally reckoned that the terrestrial Globe consists of one third Part, dry Land and 2 third Parts Water, and that of the Land, there is one third Part that is not inhabited.

That Part of the Earth that is inhabited is divided into 4 Parts called *Asia*, *Africa*, *America*, and *Europe*, which last being the Place of our Residence far's most under our Cognizance, and is divided into Kingdoms, and Provinces, concerning the Measures and Situation of which, I should have given some Account had I Room, but I must omit that till another Opportunity, and hasten to some few Observations following, with which I must conclude this Tract for this Time.

An Account of the different Seasons of the Year, and the Diversities of all Nations.

(1.) IF there be any People that inhabit directly under the Poles of the World either North or

South, they have but one Day and one Night in the Course of one whole Year, which Day contains 187 24 Hour Days and Six Hours, and 39 Minutes, which is when the Sun has pass'd the *Equinoctial* and entred into the Northern Signs, and during that Time till the Sun has reached the *Tropick* and travers'd back to the *Equinoctial* again, the Sun moves round them, so that they cast their Shadows every Way, and such are called *Periscii*, But when the Sun has passed the *Equinoctial*, and is making his Way to the remoter *Tropick* for the same Quantity of Time 187 Days, 6 Hours, and 39 Minutes, the Sun never at all ascending above their *Horizon* it is continually Night. But these Places being very Cold as well as so long dark, are thought not to be inhabited.

(2.) Those that live between the North Pole of the World, and the Circle *Arctic* which is in the Latitude of 66 Degrees and a half, and those that live between the South Pole, and the *Antarctic* Circle, which is the same Number of Degrees, because they live near the Pole, and that the Sun is at all Times remov'd from them toward either the South or North their Winter is long, and Cold, more or less according to their Distance of Latitude, and have the like Seasons and Shadows with those, that dwell under the Circle *Arctic*.

(3.) And those that inhabit directly under the *Arctic* Circle or *Antarctic*, have but one Summer and one Winter in a Year; they under the *Antarctic* Circle have always the *Tropick* of *Capricorn* appearing above their *Horizon*, and the *Tropick* of *Cancer* lying hid under it, and they under the *Arctic* Circle have the Circles in the same Manner *Vice Versa*, so that their longest Day under the *Antarctic* Circle, is when the Sun touches the *Tropick* of *Capricorn*, as is 24 Hours and their Night but a Moment, and those in the *Arctic*, when the Sun is in *Cancer* 24 Hours, as before, and as to their Shadows, they always cast them toward the North, when the Sun is in the *Meridian*, that is at Noon.

(4.) Those People that inhabit between the Circle *Antarctic* and *Arctic*, and the *Tropick of Capricorn* and *Cancer*: from the Latitude of 23 and a half, to the Latitude of 66 and a half: they between the *Arctic* do always cast theirs Northward at Noon, and those between the *Antarctic* do cast theirs to the Southward, and have but one Summer in the Year.

Those People that Inhabit directly under the *Tropicks of Capricorn* or *Cancer*, have but one Summer and one Winter in a Year; and those under the *Tropick of Capricorn*, have always their Shadows pointing toward the South, and those under *Cancer* toward the North; and their Days and Nights are either longer, or shorter, according to the Sun's Declination.

Those that Inhabit between the *Tropicks* and the *Æquinoctial*, that is, from the *Æquinoctial* to the Latitude of 23 degrees and a half, all such Places have the Days and Nights always unequal; still encreasing or decreasing, according, to the Sun's Approximation or Digression, by Reason that their Horizon declineth from the Poles of the World, and such People have always two Summers, and two Winters in one Year.

Those People that live directly under the *Æquinoctial*, where they can at one Instant see both the North and South Poles; the Sun Passes over their Heads at Noon, when he is in *Aries* and *Libra*, which makes them have two Summers in one Year and very Hot, and their Shadows are then downright from Head to Foot: But when the Sun has reach'd the *Tropicks of Cancer*, they have one Winter, and *Capricorn* another Winter, but neither of them so Cold as ours.

But a further Account of these Matters, and several others must be referred till Opportunity shall offer.

F I N I S.



